

Northern Maine Medical Center)
Aroostook County)
Fort Kent, Maine)
A-130-71-J-R/M)

**Departmental
Findings of Fact and Order
Air Emission License**

After review of the air emissions license renewal application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Northern Maine Medical Center (NMMC) of Fort Kent, Maine has applied to renew their Air Emission License permitting the operation of emission sources associated with their healthcare facility.

NMMC has requested the removal of the Class IV-B Incinerator from their Air Emission License as it is no longer in operation.

B. Emission Equipment

NMMC is authorized to operate the following equipment:

Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Stack #</u>
Boiler #1	12.6	84	#6 at 2.0%	1
Boiler #2	6.9	50	#2 at 0.5%	1
Boiler #3	6.9	50	#2 at 0.5%	1

Electrical Generation Equipment

<u>Equipment</u>	<u>Power Output (kW)</u>	<u>Firing Rate (gal/hr)</u>	<u>Fuel Type, % Sulfur</u>	<u>Stack #</u>
Diesel Generator #1	400	29.2	Diesel, 0.05%	2

C. Application Classification

The application for NMMC does not include the licensing of increased emissions or the installation of new equipment. The medical waste incinerator has been taken out of service and has been removed from this license. This will cause a decrease in overall emissions. Therefore, the license is considered to be a renewal of a minor source and has been processed as such.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Boiler #1

Boiler #1 has a maximum design heat input capacity of 12.6 MMBtu/hr. Boiler #1 fires #6 fuel oil with a maximum sulfur content not to exceed 2.0% by weight. Boiler #1 was manufactured prior to 1989 and is therefore not subject to EPA New Source Performance Standards (NSPS) Subpart Dc for boilers with a heat input of 10 MMBtu/hr or greater and manufactured after June 9, 1989.

A BPT analysis for Boiler #1 is as follows:

1. Chapter 106 regulates fuel sulfur content. Boiler #1 shall fire #6 fuel oil with a sulfur content not to exceed 2.0%.
2. Chapter 103 regulates PM emission limits. PM emissions from Boiler #1 shall not exceed 0.20 lb PM/MMBtu.
3. SO₂, NO_x, CO and VOC emission limits are based on AP-42 data (1998) and are outlined below:
 - SO₂ - #6 Fuel Oil, 2.0% S – 314 lb SO₂/1000 gal
 - NO_x - #6 Fuel Oil, 2.0% S – 55 lb NO_x/1000 gal
 - CO - #6 Fuel Oil, 2.0% S – 5 lb CO/1000 gal
 - VOC - #6 Fuel Oil, 2.0% S – 1.605 lb VOC/1000 gal

C. Boilers #2 and #3

Boilers #2 and #3 each have a maximum design heat input capacity of 6.9 MMBtu/hr. Boilers #2 and #3 are therefore not subject to EPA New Source Performance Standards (NSPS) Subpart Dc for boilers with a heat input of 10 MMBtu/hr or greater and manufactured after June 9, 1989. The boilers fire #2 fuel oil with a maximum sulfur content not to exceed 0.5% by weight.

A BPT analysis for Boilers #2 and #3 is as follows:

1. Chapter 106 regulates fuel sulfur content. However, the BPT limit of 0.5% sulfur is more stringent and shall be used.
2. Chapter 103 regulates PM emission limits. The PM limit for Boilers #2 and #3 shall be 0.20 lb PM/MMBtu.
3. SO₂, NO_x, CO and VOC emission limits are based on AP-42 data (1998) and are outlined below:
 - SO₂ - #2 Fuel Oil, 0.5% S – 78.5 lb SO₂/1000 gal
 - NO_x - #2 Fuel Oil, 0.5% S – 20 lb NO_x/1000 gal
 - CO - #2 Fuel Oil, 0.5% S – 5 lb CO/1000 gal
 - VOC - #2 Fuel Oil, 0.5% S – 0.556 lb VOC/1000 gal

D. Opacity Standards

Boilers #1, #2 and #3 vent through a common stack. As per MEDEP Chapter 101, the common stack shall not exceed an opacity of 30 percent recorded as six (6) minute block averages, except for no more than three (3), six (6) minute block averages in a 3-hour block period.

E. Diesel Generator

NMMC operates an Emergency Diesel Generator. The generator has a Maximum Design Capacity of 3.9 MMBtu/hr and was installed in 2000.

“Emergency” is defined in Chapter 100 and throughout this document as: “... any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology based emission limitation under the license, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.”

A summary of the BPT analysis for the Emergency Generator is the following:

1. The generator shall fire only diesel fuel with a maximum sulfur content not to exceed 0.05% by weight.
2. The generator shall be limited to 500 hr/yr of operation based on a 12 month rolling total. Compliance shall be demonstrated by a written log of all generator operating hours **and** hour meters installed, maintained and operated on each generator.
3. Chapter 106 regulates fuel sulfur content, however in this case a BPT analysis for SO₂ determined a more stringent limit of 0.05% was appropriate and shall be used.
4. A BPT analysis determined that a PM emission limit of 0.12 lb PM/MMBtu shall be used.
5. NO_x, CO, and VOC emission limits are based upon AP-42 data (1996).
6. Visible emissions from the generator shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period.

F. Fuel Use Cap and Annual Emissions

NMMC shall be restricted to the following fuel use limits and annual emissions, each based on a 12 month rolling total:

1. NMMC shall be limited to 150,000 gallons combined of #6 Fuel Oil with a Sulfur content not to exceed 2.0% and #2 Fuel Oil with a sulfur content not to exceed 0.5% for the #1, #2, and #3 Boilers.
2. The Emergency Generator (firing diesel fuel, 0.05% S) shall be limited to 500 hours of operation.

Total Licensed Annual Emission for the Facility
Tons/year

(used to calculate the annual license fee)

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
*Boilers #1, #2, #3	2.25	2.25	23.64	4.13	0.38	0.12
Emergency Gen #1	0.12	0.12	0.05	4.41	0.95	0.35
Total TPY	2.37	2.37	23.69	8.54	1.33	0.47

* Boilers #1, #2 and #3 emissions are based on the burning of 150,000 gal of #6 fuel oil @ 2.0% sulfur.

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III.AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Modeling and monitoring are not required for a renewal if the total emissions of any pollutant released do not exceed the following:

<u>Pollutant</u>	<u>Tons/Year</u>
PM	50
PM ₁₀	25
SO ₂	50
NO _x	100
CO	250

Based on the total facility emissions, NMMC is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-130-71-J-R/M subject to the following conditions:

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (Title 38 MRSA §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [MEDEP Chapter 115]

- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [MEDEP Chapter 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [MEDEP Chapter 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353. [MEDEP Chapter 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [MEDEP Chapter 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [MEDEP Chapter 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [MEDEP Chapter 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [MEDEP Chapter 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [MEDEP Chapter 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:

- A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 2. pursuant to any other requirement of this license to perform stack testing.
 - B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - C. submit a written report to the Department within thirty (30) days from date of test completion.
[MEDEP Chapter 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
[MEDEP Chapter 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [MEDEP Chapter 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions

unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [MEDEP Chapter 115]

- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [MEDEP Chapter 115]

Specific Conditions

- (16) **Boilers #1, #2 and #3** [MEDEP Chapter 115, BPT]
- A. Boiler #1 shall be limited to the firing of #6 fuel oil with a maximum sulfur content not to exceed 2.0% by weight and boilers #2 and #3 shall be limited to the firing of #2 fuel oil with a maximum sulfur content not to exceed 0.5% by weight.
- B. NMMC shall be limited to an annual fuel use limit of 150,000 gallons of #6 and #2 fuel oil combined in boilers #1, #2 and #3 (based on a 12 month rolling total). A log shall be maintained documenting all fuel oil deliveries with receipt to include the volume and sulfur content of each shipment.
- C. Boilers #1, #2 and #3 shall each not exceed the following emission limits:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Boiler #1	lb/MMBtu	0.20	-	-	-	-	-
	lb/hr	2.52	2.52	26.48	4.62	0.42	0.13
Boiler #2	lb/MMBtu	0.20	-	-	-	-	-
	lb/hr	1.38	1.38	3.47	0.99	0.25	0.03
Boiler #3	lb/MMBtu	0.20	-	-	-	-	-
	lb/hr	1.38	1.38	3.47	0.99	0.25	0.03

- D. Visible emissions from the common stack shall not exceed 30% opacity on a six (6) minute block average basis, except for no more than three (3), six (6) minute block averages in a 3-hour period. [MEDEP Chapter 101]

- (17) **Emergency Diesel Generator** [MEDEP Chapter 115, BPT]
- A. NMMC shall limit the operation of the Emergency Generator to 500 hr/yr (based on a 12 month rolling total). An hour meter shall be maintained and operated on the Emergency Generator.
 - B. A log documenting the dates, times, and reason of operation for the Emergency Generator shall be kept.
 - C. The Emergency Generator shall fire diesel fuel with a sulfur limit not to exceed 0.05% by weight. Compliance shall be based on fuel receipts from the supplier showing the quantity of fuel delivered and the percent sulfur of the fuel.
 - D. The Emergency Generator shall not exceed the following emission limits:

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>lb/hr</u>
PM	0.12	0.48
PM ₁₀	-	0.48
SO ₂	-	0.21
NO _x	-	17.64
CO	-	3.80
VOC	-	1.40

- E. Visible emissions from the Emergency Generator shall not exceed 20% opacity on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a 3-hour period. [MEDEP Chapter 101]
- (18) **Fugitive Emissions**
Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20 percent, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20 percent in any one (1) hour. [MEDEP Chapter 101]
- (19) NMMC shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (Title 38 MRSA §605).

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(20) **Payment of Annual License Fee**

NMMC shall pay the annual air emission license fee within 30 days of **October 31st** of each year. Pursuant to Title 38-353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under section 341-D, subsection 3. [38 MRSA §353-A]

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 2/27/2004

Date of application acceptance: 3/8/2004

Date filed with the Board of Environmental Protection: _____

This Order prepared by Jonathan Voisine, Bureau of Air Quality.